Using Remote Assist to Expand Your Expertise

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What is Remote Assist?

Siemens Remote Assist (RA) is an application that allows you to share your MR workspace with the Application Specialist who is not on site. With your permission, the system is connected via an encrypted broadband connection – with Siemens Remote Service ensuring secure data transfer.

The Remote Assist application allows Application Specialists to trouble-shoot scanning problems and offer you real-time assistance with difficult tasks at short notice. The Remote Assist application also allows your institution to grow its potential by participating in an application session to set up a new service. In this article we will take a look at an institution that wanted to set up a pulmonary angiogram service. Instead of booking a day of applications training, the training was done remotely; this led to less disruption for the institution and its patients, and a faster response time from the applications team.

How it works

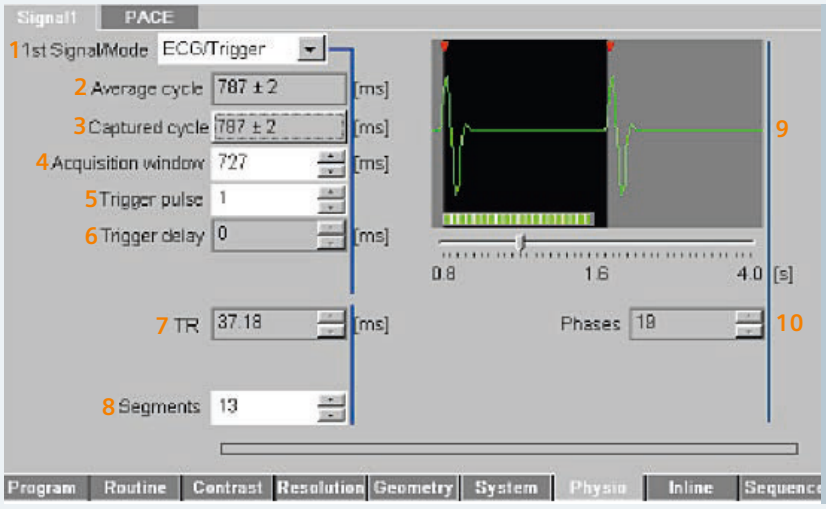
Using Siemens Remote Assist provides real-time image quality assessment, protocol optimization and workflow enhancements. The Application Specialist will ask you to go to Options > Service > Remote Assistance. The Siemens Application Specialist will then give you a 6 digit security number. Once entered, you are logged on and both parties then share the MR screen. The Application Specialist gives visual guidance with a red cursor and may take control of the console with your permission. To allow full access, you need to select the RA icon at the bottom of the screen and follow the instructions.

Guidance over the phone, with additional on-screen support, is usually all that is necessary to provide a strong training session. Verbal and visual reinforcement of the training can lead to a better outcome for your team and your patients.

Organizing the RA session

An RA session can be organized whenever it is required through the Customer Care Centre – for instance to answer questions concerning an application or image review. If you wish to participate in a longer session to improve or grow your service, preparation is helpful. Contact the Customer Care Centre and organize for your Application Specialist to call you and discuss your application needs.

During this phone call, the Application Specialist may dial onto the scanner to look at the available software and applications. There should be a discussion of the desired outcomes. By remotely organizing and remotely performing the training, you can improve the efficiency of your department. There should be no need for scanner down time, as software checks and organization are done remotely. RA is also less intrusive, as no one is on site, and additionally, there is more room for further staff members to attend the session.



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1. Trigger type
2. Average R-R cycle
3. The captured R-R cycle to be used as trigger.
4. Acquisition window. The time you have to perform your pulse sequence.
5. Trigger pulse. 1 = every pulse. 2 = every other pulse.
6. Trigger delay
7. TR
8. Segments lines of raw data collected in a phase. Affects your TR.
9. Graphic of ECG and pulse sequence. Green segments will be collected, red will cause a trigger to miss.
10. Number of phases to be scanned.

When preparing for a RA session, you should ensure that a suitable date and enough time are allotted to staff and system to ensure the best possible training environment. If you are setting up a new service, it may be better to involve more than one patient as training participant. Ideally, all stakeholders involved in this service growth should be available, i.e. radiographers who will be performing the study and training of others, and clinicians who will be interested in image quality. With this setup, the new service can be ready to start right after finishing the RA session.

Performing the RA session

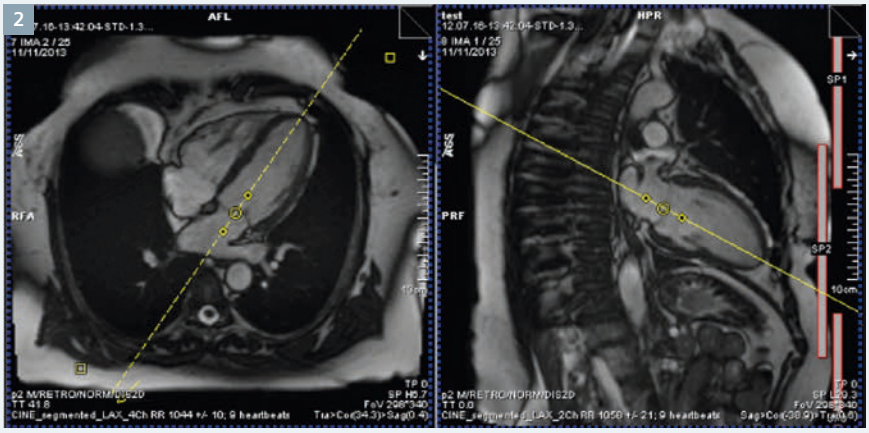
In this example, the user had many years of advanced scanning experience and wanted to start a pulmonary angiogram service. It had clinical help from another site. It had also performed angiograms before. The user was interested in acquiring additional knowledge concerning test bolus angiograms and wanted some basic cardiac sequences to allow for optimum positioning.

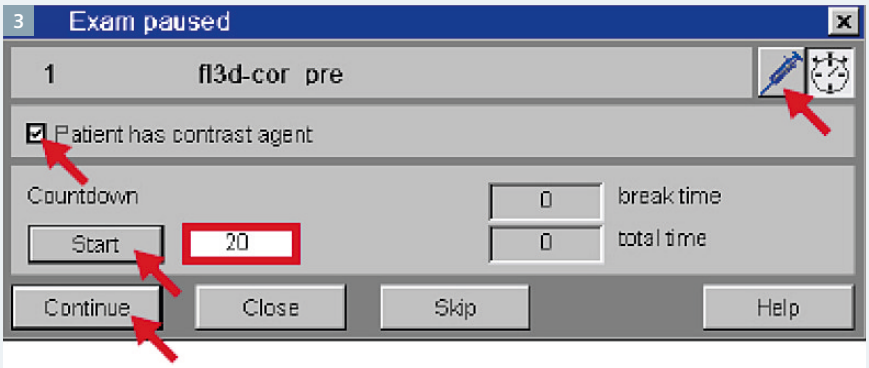
The RA was organized as above and two patients were booked for the session. All software required for the session had been checked for updates and system integration to ensure a best possible system preparation.

At the start of the session, ECG gating was taught. Positioning of electrodes was done by staff on site.

The Physio page was explained (Fig. 1).

To localize the pulmonary arteries, cardiac planes for 2-chamber, 4-chamber and coronal RVOT (right ventricular outflow tract) views of the heart were shown (Fig. 2). Dark blood and bright blood scanning was also explained. The angiography workflow was created using the base angiography series in the Siemens default tree. The field-of-view (FOV) and coverage were altered. Increasing the slices in the 3D slab gave more signal which could be used to accelerate the scan using iPat. The workflow was tested including the





test-bolus stage to practice breathing patterns with the patient, and to assess image quality before administrating contrast media. Using the rerun functionality in the workflow allows you to restart the workflow.

The scan sequence for the Angio follows.

Test Bolus (2 ml of contrast media given at the same flow rate with the saline flush as the primary dose).

3D angio pre-contrast (breath-hold).

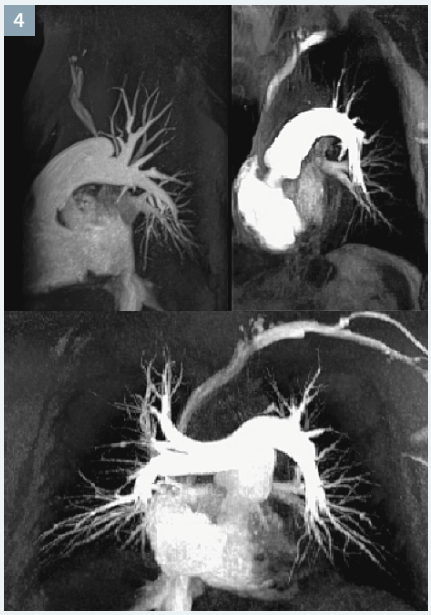
Pause (enter contrast details here to ensure subtraction).

3D angio post-contrast (in Properties set up wait for user to start flag man on B level software arrow on D and E level. This gives you the pop-up shown in Figure 3. You are offered the possibility to set the countdown to delay the scan. You can also set AutoStart in the properties of D and E level software. AutoStart will start the measurement after the countdown has finished.

Once you run the test bolus sequence, you get a set of images with time stamps at the bottom. You can then simply take that time stamp and enter it into the countdown clock to set your timing. To improve your timing, you can load the data into mean curve – or use the Angio Dot Engine.

To perform a mean curve, open the application mean curve. Drag and drop the test bolus sequence from the browser to the top-left box. There are a set of tools on the right that change scaling and sorting to normal time. Draw a region-of-interest (ROI) over an artery and then select curve calculation. You now have the timing of the test bolus. You can look at when the contrast arrives: The real bolus will be longer so it will peak later, so you can offset your scan by using the time to center (TTC) parameter on the Angio tab. Therefore, if arrival time is 18 seconds, you can set a TTC to 2 seconds to offset your measurement over the peak of the primary dose.

Once the timing is calculated, run your pre-contrast scan. When the pause opens for the post-contrast scan, enter your time into the countdown. Start the contrast and timer at the same time. About 8 seconds



before the end give your breath-hold instructions. If you use AutoStart, the scan will start by itself – if not, hit continue at 0 seconds. The image quality obtained is shown. This was reviewed by the radiologists. (Fig. 4) Image quality (IQ) was evaluated and then requirements were considered. A second patient was scanned by the user. The workflow was repeated again without any verbal assistance from the Application Specialist to ensure that the service could continue on its own. IQ was then checked with this different patient.

Once this was all finished, the protocols were saved and any options for image loading were set using the Find function and properties.

Conclusion

Remote Assist can give you quick answers to applications and IQ issues. However, it is also a useful tool for training, offering you a direct, hands-on approach, while the Application Specialist provides verbal and on-screen guidance. You should therefore perhaps consider an RA session the next time you prepare to expand your service lines.

Availability

Remote Assist is provided only in combination with a standard service contract (Performance Plan TOP, PLUS, PRO) or in combination with an Education Plan, which can either be offered standalone or as an optional element of a service contract.

With Siemens Education Plans, a package of User Services will be tailored to your training and education needs. Based on your goals, your package can include classroom or on-site trainings, hands-on workshops, e-learnings and Webinars, remote trainings, or consulting services.

Educations Plans are available in three service levels:

- **Routine Plan** for basic image quality and patient safety; ideal for continuous on-boarding of new staff. In addition to on-site training, this plan offers Remote Assist for direct application assistance.
- **Expertise Plan** to enhance clinical expertise, improve patient outcome and quality of care, and strengthen employee satisfaction. In addition to classroom training, you can choose from a variety of clinical workshops.
- **Excellence Plan** helps you stand out as a center of excellence. The primary goal is to improve existing routines and daily performance; the focus is on consulting and optimization.

An Education Plan runs for multiple years, and it will typically be linked to one of your Siemens imaging systems. With the Multi-Modality Option, you can expand the Education Plan to include trainings for other Siemens imaging systems. With an Education Plan, you can be confident that your clinical staff will be well-trained and will remain consistently at the forefront of your system's lifecycle. Siemens User Services offers your staff the opportunity to get the most out of your equipment – to use your imaging systems to their fullest potential and to create the best possible outcome for your patients.

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